

Notice of Allowability

Application No.

10/606,016

Examiner

Matthew L. Fedowitz

Applicant(s)

FRYDMAN ET AL.

Art Unit

1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/11/2005.
2. ☒ The allowed claim(s) is/are 4,6,9,10,14 and 16-26.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 9/2/2005, 8/22/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

JAMES O. WILSON

SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

DETAILED ACTION

During an interview with Robert Cerpa on and October 3, 2003 an agreement was reached where claims 9 and 16 were to be amended and is discussed below. Claims 4, 6, 9, 10, 14 and 16-26 are allowable. Claims 1-3, 5, 7-8, 11-13 and 15 have been cancelled

Examiner's Comments

The applicant's cancellation of claims 1-3, 5, 7-8, 11-13 and 15 has traversed the §102(b) rejection in the office action dated January 11, 2005.

Claims 4, 6, 9, 10, 14 and 16-26 are allowable because the claimed subject matter is not taught or fairly suggested in the prior art. The claims are allowable for the following reasons:

- I. The primary reason for allowance of claims 4, 16, 17, 18, 20, 21, 24, 25 and 26 is the inclusion of the limitation requiring the attachment of the Q moiety at K. The prior art fails to teach or fairly suggest an attachment of this nature.
- II. The primary reason for allowance of claims 6, 9, 10, 22 and 23 is the inclusion of the limitation requiring at least one A substituent to comprise a cyclopropane group; at least one B-A-B unit to comprise a cycloalkyl moiety and at least one B-A-B unit to comprise a cyclopropane moiety. The prior art fails to teach or fairly suggest attaching moieties of this nature to porphyrins.
- III. The primary reason for allowance of claim 14 is the inclusion of the limitation requiring both J₁ and J₂ to be identical. The requirement of both J₁ and J₂ being identical, in view of the claims upon which it is dependent, when considered as a whole are not taught or fairly suggested in the prior art.

Art Unit: 1623

IV. The primary reason for allowance of claims 19 and an additional reason for allowance of claim 20 is the inclusion of the limitation requiring the attachment of the claimed structure at K. The prior art fails to teach or fairly suggest an attachment of this nature.

The closest prior art is found in the Basu *et al.* (WO 00/66587) reference where polyamine –porphyrin conjugates are disclosed (see page 60 Table 2). However, the applicant's claims are divergent from the prior art for the reasons stated above.

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to the applicant, an amendment may be filed as provided by 37 CR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

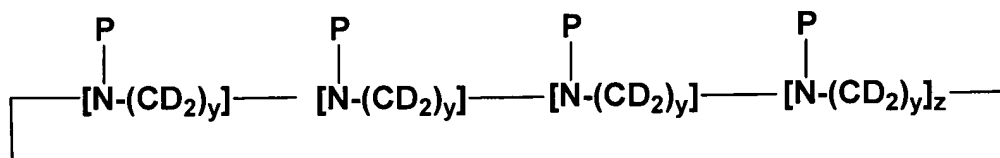
The application has been amended as follows:

1. In claim 9, the phrase "where J₁ and J₂ are independently M and each M is independently selected from the group consisting of -(B-A-B)-G-(B-A-B)-(N(P)-B-A-B)_n-K; J₃, J₄, J₆ and J₈ are independently selected from methyl and ethyl; and J₅ and J₇ are independently selected from methyl, ethyl, and -SO₃H; wherein at least one B-A-B unit comprises a cycloalkyl moiety" has been changed. The claim should read as follows: --"where J₁ and J₂ are independently M and each M is independently selected from the group consisting of -(B-A-B)-G-(B-A-B)-(N(P)-B-A-B)_n-K; where A, B, G, P, K and n are as defined in claim 4; J₃, J₄, J₆ and J₈ are independently selected from methyl and ethyl; and J₅ and J₇ are independently

Art Unit: 1623

selected from methyl, ethyl, and $-\text{SO}_3\text{H}$; wherein at least one B-A-B unit comprises a cycloalkyl moiety.”--

2. In claim 16, the phrase “n is independently an integer from 0 to 20; each P is independently selected from the group consisting of H and $\text{C}_1\text{-C}_{12}$ alkyl; each K is independently selected from the group consisting of H, $\text{C}_1\text{-C}_{12}$ alkyl, $\text{C}_2\text{-C}_{12}$ alkenyl, $\text{C}_2\text{-C}_{12}$ alkynyl, $\text{C}_3\text{-C}_{12}$ cycloalkyl, $\text{C}_3\text{-C}_8$ cycloaryl, $\text{C}_3\text{-C}_{12}$ cycloalkenyl, $\text{C}_3\text{-C}_{12}$ cycloalkynyl, $\text{C}_1\text{-C}_{12}$ alkanol, $\text{C}_3\text{-C}_{12}$ cycloalkanol, and $\text{C}_3\text{-C}_8$ hydroxyaryl, and Q; where each Q is independently selected from the group consisting of



where each P is independently selected from the group consisting of H and $\text{C}_1\text{-C}_{12}$ alkyl, each D is selected from the group consisting of H and $\text{C}_1\text{-C}_{32}$ alkyl, y is an integer from 1 to 8, and z is an integer from 0 to 5, and where the Q moiety is attached to the remainder of the molecule at any C or N atom in the Q moiety (including C atoms in the D or P moieties) by removing a hydrogen atom, a P substituent, or a D substituent of the Q moiety to form an open valence for attachment to the remainder of the molecule; and where the remaining members or member of J_1 , J_2 , J_3 , J_4 , J_5 , J_6 , J_7 and J_8 are each independently selected from the group consisting of H, -B-A-B, -COOH, $-\text{SO}_3\text{H}$, -B-A-B-COOH, or -B-A-B- SO_3H , where each A and each B are independently selected as defined above and with the proviso that each -B-A-B- unit has at least one carbon atom wherein each -K is independently Q,” has been changed. The claim should read as follows:
--“ n is independently an integer from 0 to 20; and where the remaining members or member of

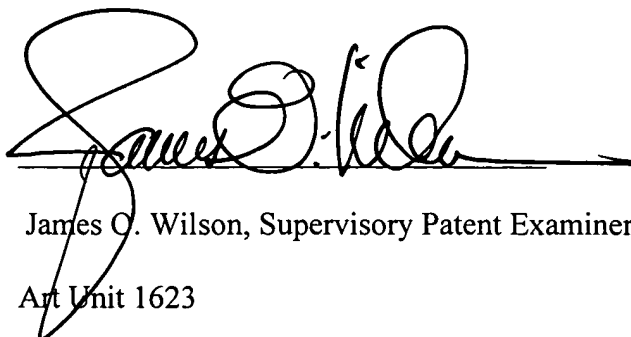
Art Unit: 1623

J₁, J₂, J₃, J₄, J₅, J₆, J₇ and J₈ are each independently selected from the group consisting of H, -B-A-B, -COOH, -SO₃H, -B-A-B-COOH, or -B-A-B-SO₃H, where each A and each B are independently selected as defined above and with the proviso that each -B-A-B- unit has at least one carbon atom wherein each -K is independently Q;”--

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew L. Fedowitz whose telephone number is (571) 272-3105. If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary, James O. Wilson, can be reached on (571) 272-0661. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)

Matthew L. Fedowitz, Pharm.D., Esq.



James O. Wilson, Supervisory Patent Examiner
Art Unit 1623